



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,621	03/24/2004	Anand Ganesh Dabak	TI-28940.1	6084
23494	7590	01/23/2006	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265				GHULAMALI, QUTBUDDIN
ART UNIT		PAPER NUMBER		
		2637		

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

SF

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/808,621	DABAK ET AL.
	Examiner	Art Unit
	Qutub Ghulamali	2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 04 January 2006.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 10-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 10-12 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

## DETAILED ACTION

1. This Office Action is responsive to applicant's Remarks filed on 01/04/2006.

### *Response to Remarks*

2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. However, applicant's amendment of claim 10 does not place the claim in condition for allowance. The claims 10-12 have been rejected. The rejection is as follows:

### *Claim Objections*

3. Claim 12 objected to because of the following informalities: Claim 12, line 4, recites, "producing less". It is not clear what is being produced less than the plurality of channel estimates. Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Bottomley (USP 6,363,104).  
receiving an input signal from at least one antenna (page 5, lines 20-22)  
measuring the input signal (a measurement circuit (432) coupled to receive an input signal) (page 5, lines 23-25; page 6, lines 1-3)  
producing an output (produces) signal (425) corresponding to the measured input signal (page 6, lines 7-14);  
comparing the output signal (estimate) to a first reference signal (a comparator circuit (426) (page 6, lines 10-11);  
producing a first control signal (from TCP command) in response to the step of comparing when the output signal has a value greater than a value of the first reference signal (samples signal) (page 6 lines 22-23);  
comparing the output to a second reference signal (lead 424 (page 6, lines 1-3); and  
producing a second control signal in response to the step of comparing when the output signal has a value greater than a value of the second reference signal (page 6, lines 9-14, 21-26). The prior art of the instant application though discloses an antenna (400), however, does not show at least one of a plurality of antennas. Bottomley in a similar field of endeavor discloses Ds-CDMA communication system of processing signal and the receiver employs one or more antennas to recover the transmitted signal (col. 4, lines 24-25). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide at least one of a

plurality of antennas as taught by Bottomley so that transmit diversity can be properly utilized and enhanced when applied to the prior art of the instant application.

Regarding claims 11, the prior art discloses producing a third control signal in response to the step of comparing when the output has a value between (average) the value of the first reference signal and the value of the second reference signal (page 5, lines 21-25; page 6, lines 1-3).

As per claim 12, the prior art discloses producing a plurality of channel estimates in response to one of the first control signal and the second control signal (page 6, lines 5-14); and Producing less than the plurality of channel estimates in response to the other of the first control signal and the second control signal (page 6, lines 16-26).

### *Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (571) 272-3014. The examiner can normally be reached on Monday-Friday from 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QG.  
January 12, 2006.

*Jean B. Corrielus*  
JEAN B. CORRIELUS  
PRIMARY EXAMINER  
1-20.06